

they far outweigh the greater number of Helderbergian species. It is on this account that these beds have been included in the Oriskany.

With the inclusion of these beds in the Oriskany the question of correlation with the Oriskany of other regions at once arises. Are these lower as well as the upper beds the time equivalent of the arenaceous Oriskany as developed at Oriskany Falls, New York, or do they represent in time a part of the unconformity beneath the normal Oriskany and would, therefore, be an older or lower Oriskany?

Large *Rensselaerias* are characteristic of the typical Oriskany. *Beachia suessana* is a small and earlier form of this same type; it is one of the most abundant shells of these beds and is practically absent from the upper beds and from the Helderbergian below. *Rensselaeria subglobosa* is another small and very abundant non-Helderbergian species confined to these lower beds. The following species occurring here are quite typical of the lower Helderberg: *Rensselaeria aequiradiata*, *Nucleospira elegans*, *Stenochisma formosa*, *Uncinulus vellicatus*, *Actinopteria textilis* and *Homalonotus vanuxemi*. None of the following normal Oriskany species were found here: *Rensselaeria ovoides*, *Megalanteris ovalis*, *Camarotoechia barrandei*, *Leptocoelia flabellites*, *Spirifer arenosus*, *Chonostrophia complanata* and *Hipparionyx proximus*.

With the presence of the forms noticed above which foreshadow the normal Oriskanian fauna, the presence of a very decided Helderbergian element and the absence of so many typical Oriskanian species, an earlier fauna than the normal Oriskanian appears to be indicated. They have, therefore, been called Lower Oriskany.¹

¹Of the 30 species cited by Schuchert from the Camden (Tenn.) Lower Oriskany, 22 species are typical Oriskanian or later, 6 are Helderbergian, *Eatonia peculiaris* occurs in both and *Atrypa reticularis* ranges through the Siluric and Devonian; *Hipparionyx proximus* and *Rensselaeria ovoides* are questionably present. The typical Helderbergian *Meristella laevis* and *Pterinea*? cf. *textilis*